



Presidential Address: A History of Appendicitis

With Anecdotes Illustrating Its Importance

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Two hundred years after its anatomical description, the appendix was observed to be the site of inflammatory disease. This was not widely accepted until the publication by Fitz 120 years later. American surgeons led in demonstrating that early appendectomy was safe and life saving. Perforation of the appendix with peritonitis continues to be a significant problem, but the mortality rate has dramatically declined. Appendiceal disease has clearly affected the course of history.

ALTHOUGH PRESENTED at the 94th meeting of the Southern Surgical Association, this is the 91st presidential address to be published. In 1904, Floyd W. McRae was ill, and no Presidential Address was given or published. In 1923, President James F. Mitchell gave as his address "A Surgical Travelogue," consisting largely of slides and films, which was not published. In 1942, the Association did not meet because of the war.

None of the 91 previous addresses have been devoted to the subject of the appendix. This is surprising, both because of the importance of appendiceal disease and because the founding (1887) and early years of the Southern Surgical Association coincided with the final acceptance of the concept of appendicitis and with the development and wide application of surgical treatment.

This is an attempt to tell the story of the recognition of appendicitis, to trace the development of surgical

treatment, and to illustrate its importance by specific examples. A recitation of previously published dates, names, and places would be of little value unless something is learned about the process by which medicine makes progress. The history of appendicitis includes examples of great resistance to changing concepts, brilliant but unaccepted early observations, emotional support for unsupportable views, the importance of timing, and, finally, the development of a highly satisfactory solution. No claim can be made that this is a comprehensive review of the literature dealing with the appendix. By the year 1889, 2500 and, by 1950, more than 13,000 articles or books dealing with the appendix had been published.^{12,40} Rather, the intent is to present a panorama of milestones as well as they can be recognized.

Anatomy

The appendix is not mentioned in very early anatomical studies, probably because the studies were done on animal species having no such organ.²² The physician-anatomist, Berengario DaCarpi, first described the appendix in 1521.²² The appendix was clearly depicted in anatomic drawings by Leonardo da Vinci, made in 1492 (Fig. 1) but not published until the 18th century, and

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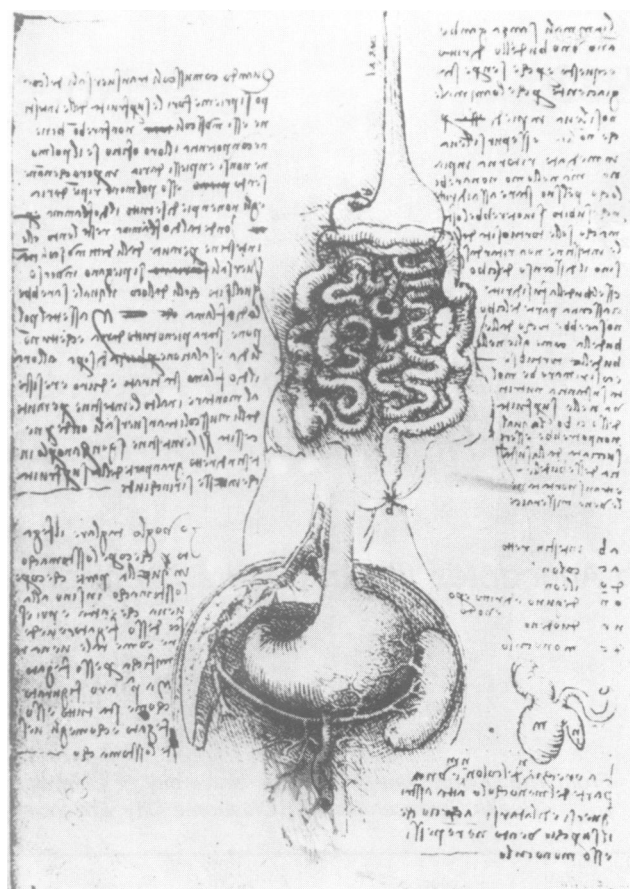


FIG. 1. Drawing by Leonardo da Vinci showing the appendix (1492) (by permission of The Williams and Wilkins Company).

was well illustrated in the Andreas Vesalius work, "*De Humani Corporis Fabrica*," published in 1543 (Fig. 2), although it was not described in the text.^{49,71} After the studies of Morgagni, published in 1719, little additional information regarding the gross anatomy of the appendix was added.⁶⁴ The fact that some early anatomists termed the appendix "cecum" added lasting confusion in interpreting early writings.

Pathology

Acute inflammation of the vermiform appendix is probably as old as man, and an Egyptian mummy of the Byzantine era exhibits adhesions in the right lower quadrant, suggestive of old appendicitis.⁷ Many accounts of the history of appendicitis credit Jean Fernel for its first description in a paper published in 1544. Despite the fact that Fernel is a very interesting man, the first to measure accurately the degree in a meridian, and the court physician to Catherine de Medici, it is difficult to accept the case as an example of appendicitis.⁴⁴ The same is true for the report, published in a book in 1652, by Von Hilden, a German surgeon. The

account of Lorenz Heister in 1711 is an unequivocal description of perforated appendix with abscess.⁴⁴ Heister, a pupil of Boerhaave, who became professor of Surgery at Altdorf and then at Helmstedt, performed an autopsy on a recently executed criminal and described opening a small abscess adjacent to a blackened appendix (Fig. 3). It is stated that no clinical history of complaints was available.⁴⁴ Parisian surgeon, Mestivier, in 1759 reported an autopsy on a 45-year-old man who died shortly after surgical drainage of a right lower quadrant abscess.⁶⁴ Mestivier described perforation of the appendix by a pin, and ascribed the abscess to the perforation. This, the second unequivocal identification of the appendix as the site of disease, started a long infatuation with foreign bodies as causes of obstruction and perforation of the appendix. John Hunter described a gangrenous appendix, encountered at an autopsy that he performed on Colonel Dalrymple in 1767.¹⁶ Unfortunately, this apparently did not arouse the characteristic Hunterian curiosity. A description of a perforated ap-

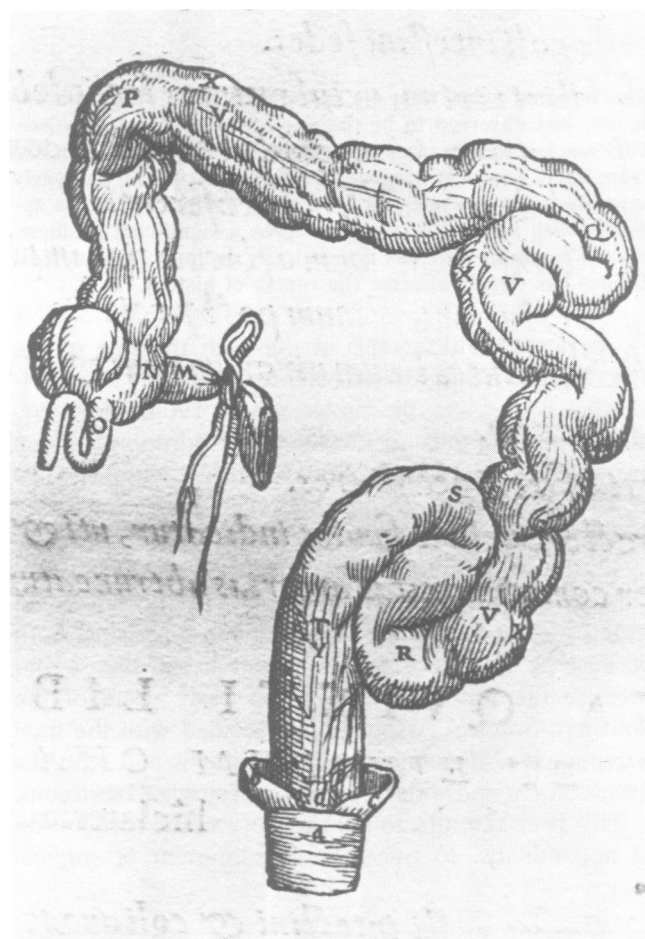


FIG. 2. Andreas Vesalius "*De Humani Corporis Fabrica*" 1543 (courtesy of the History of Science Collections, University of Oklahoma Libraries).



FIG. 3. Lorenz Heister (courtesy of the Woodward Biomedical Library, University of British Columbia).

pendix containing a fecalith with a normal cecum, found during autopsy of a 5-year-old boy, was published by John Parkinson in 1812.⁴⁴ Parkinson was an eccentric, a social reformer, and a liberal whose essay on shaking palsy, published five years later, furnished the basis for his lasting recognition.⁴⁴

In 1824, Louyer-Villermay described gangrenous appendices, demonstrated at autopsies in two young men.⁶⁵ This paper was presented to the Royal Academy of Medicine in Paris and stimulated the interest of the Parisian physician, Francois Melier, who added six additional autopsy descriptions of appendicitis, one of which had been suspected prior to death.⁶⁴ Melier clearly suggested the possibility of surgical removal of the appendix in 1827. Generally, it is said that Melier's paper was largely ignored because of the influence of Baron Guillaume Dupuytren (Fig. 4), the leading surgeon of Paris.^{23,44,50} Some authors imply that there was direct confrontation between the two. No evidence of this can be found, but it is true that Dupuytren did not recognize the appendix as a cause for right lower quadrant inflam-

matory disease, continuing to feel that such processes began in or around the cecum. Dupuytren was an irresistibly unpleasant character. Born in 1777, he grew up with the hardships of post-revolutionary France, and is said to have lived for months at a time on bread and cheese while in medical school in Paris. He rose rapidly in the profession, despite failure to appear at his planned wedding to the daughter of his old chief, Boyer. He became Chief of Surgery at the Hotel Dieu in 1815. Dupuytren was arrogant, quarrelsome with colleagues, demanding of associates, and rough with patients. He gained a reputation as one of the leading surgeons and teachers of his day and acquired a fortune in the process. The observation that this son of the revolution assumed many of the objectionable features of aristocracy is interesting.⁹ His title was conferred by Louis XVIII after his unsuccessful treatment of the Duc de Berry, who was stabbed in the chest by an assassin.⁴² Dupuytren is quoted as saying, "I have been mistaken, but I have been mistaken less than other surgeons."³ This period (1830)



FIG. 4. Baron Guillaume Dupuytren (courtesy of the Yale Medical History Library).

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PERFORATING INFLAMMATION OF THE VERMIFORM
APPENDIX;

WITH SPECIAL REFERENCE TO ITS EARLY DIAGNOSIS AND TREATMENT.¹

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FIG. 5. Title page of Fitz's classic publication.

saw papers by Goldbeck and Albers, further confusing the typhlitis-perityphlitis controversy.²²

In Volume I of a book entitled "Elements of Practical Medicine" published in 1839, Bright and Addison, the great physicians of Guy's Hospital, clearly described the symptomatology of appendicitis and stated that the appendix was the cause of many or most of the inflammatory processes of the right iliac fossa.¹⁰ Surgical treatment is not mentioned. The opposition of Dupuytren is given as an explanation for the failure of the profession to accept Melier's indictment of the appendix. There is no accepted explanation for ignoring the views of Bright and Addison, which were similar to those of Thomas Hodgkin.^{62,11,39} In the European literature, Volz, in 1846, again identified the appendix as the site of origin of right lower quadrant inflammatory disease.³⁹

It seems likely that the failure to accept repeated observations that the appendix was overwhelmingly important in right lower quadrant inflammatory disease was because the therapeutic implications were not clear. Despite the performance of occasional successful abdominal operations, laparotomy, prior to the advent of general anesthesia and an appreciation of the cause of infection, was justifiably considered as a last resort. Ether, nitrous oxide, and chloroform anesthesia were quickly accepted in the middle of the 19th century, and Lister's first paper on antiseptics was published in 1867.⁴³ Although "Listerism" was not accepted immediately by the majority of surgeons and, in fact, was opposed for several decades, abdominal operations were certainly more tolerable, more frequent, and safer after 1870.

In June 1886, the first meeting of the Association of American Physicians was held in Washington, DC. Most of the leading American physicians and pathologists were present, including Sternberg, Prudden, Councilman, Welch, Delafield, and Osler. In later years, this meeting was termed by Sir William Osler as "the coming

of age party of clinical medicine in America."⁵⁵ Before this distinguished audience, on June 18th, Dr. Reginald H. Fitz read a paper entitled "Perforating Inflammation of the Vermiform Appendix; With Special Reference to Its Early Diagnosis and Treatment."²⁵ In this paper, Fitz emphasized that most inflammatory disease of the right lower quadrant begins in the appendix. The clinical features of appendicitis are clearly described and, most surprisingly, Fitz urged early surgical removal of the appendix (Fig. 5). For the first time, the term "appendicitis" was used. Although the word has been criticized as consisting of a Greek suffix with a Latin stem, it quickly became accepted.²³ Fitz's paper was enormously important, not because it contained observations that were new, but because the message was delivered to the right audience at a time when the potential for surgical treatment could be recognized.¹⁵

At the time of his presentation, Fitz was Shattuck Professor of Pathological Anatomy at Harvard University (Fig. 6). He was a member of the ninth generation of Fitzes in America, the original settlers having been in the Massachusetts Bay colony in 1639. Named for



FIG. 6. Reginald Heber Fitz (courtesy of Harvard Medical Archives).

the British hymnologist, Reginald Heber, Fitz grew up in a large New England family. He was educated at Harvard College and Harvard Medical School and, following a common custom of the day, spent two years in Europe after a single year of clinical experience at the Boston City Hospital. In Europe, he studied at hospitals in Vienna, Berlin, Paris, London, and Glasgow, in addition to visiting a number of other areas. In Vienna, he learned cellular pathology from Rudolf Virchow, and published a paper resulting from his work with Virchow. In 1870, Fitz returned to Boston and an appointment as Instructor of Pathologic Anatomy at Harvard Medical School. The medical school and the university were changing rapidly during the presidency of Charles William Eliot. Fitz introduced the microscope in studying disease at Harvard and, in addition to his activities at the school, conducted a private practice and was active in the Boston Dispensary. In early 1886, Fitz wrote to the medical staff of the Massachusetts General Hospital that he intended to resign from his hospital position because he had not been appointed as a Visiting Physician to the Hospital. The trustees came to Fitz's support. He was given the appointment and withdrew his resignation. This occurred during the same year that he presented the classic paper on appendicitis.⁵² Fitz continued his distinguished career, including the publication of a very important paper on pancreatitis in 1889. He continued to be active at the hospital until shortly before his death at 70 years of age, after an operation for an ulcer of the stomach. Following Fitz, there was no serious challenge to the appendix as the cause of most right lower quadrant inflammatory disease, and the terms "typhlitis" and "perityphlitis" gradually became extinct.³⁸

Surgery

The first known surgical removal of the appendix occurred in December 1735. Claudius Amyand, Huguenot refugee and a founder of St. George's Hospital in London, operated on an 11-year-old boy with a long-standing scrotal hernia and a fecal fistula of the thigh. Through a scrotal incision, the hernia was opened, revealing omentum surrounding an appendix that was perforated by a pin, giving rise to the fecal fistula. The appendix and omentum were amputated, and the fistula opened with recovery.⁶⁵ The use of large doses of opium in treating intra-abdominal inflammatory conditions was introduced in 1838 by Stokes of Dublin, and became standard treatment until the practice was challenged by surgeons more than 50 years later.⁵⁰ Although the antiperistaltic effects of opium may have allowed localization of the inflammatory process in some instances of appendicitis, the principal benefit appears to have been that the patient was allowed to die comfortably. In 1848,

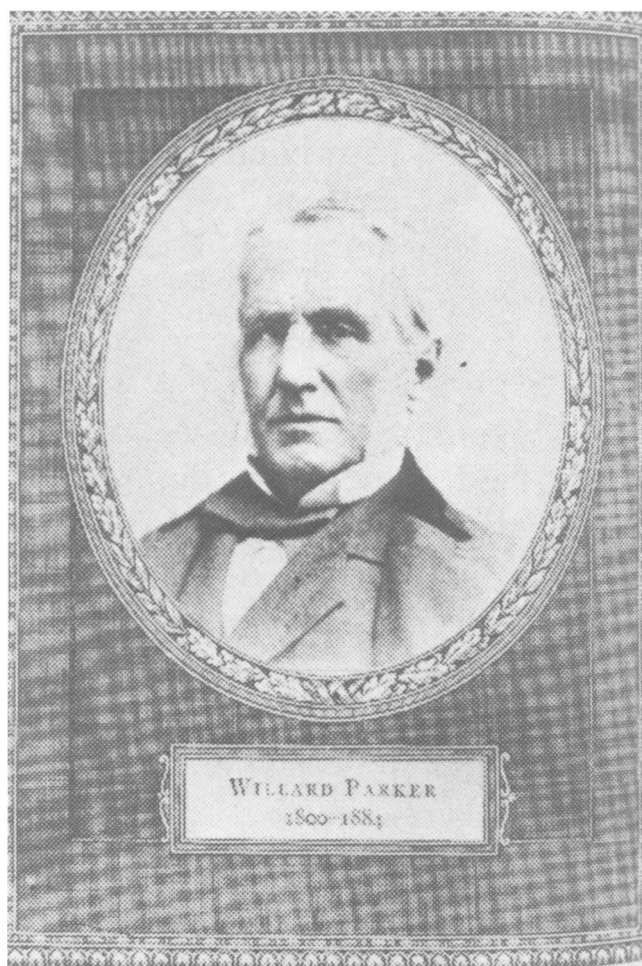


FIG. 7. Willard Parker (by permission of Surgery, Gynecology & Obstetrics).

Henry Hancock, President of the Medical Society of London, presented a paper to that Society describing the treatment of a 30-year-old recently delivered woman with acute peritonitis of several days duration. A right lower quadrant incision was made, and foul intraperitoneal fluid was drained. Two weeks after the drainage procedure, a fecalith was removed from the wound and the patient recovered.³³ An American surgeon, Willard Parker of New York, published a paper in 1867 recounting his experiences, beginning in 1843, with drainage of appendiceal abscesses (Fig. 7). He reported a total of four cases and advocated surgical drainage after the fifth day of illness, but without waiting for fluctuance.⁵⁶ This surgical approach gained some acceptance and was later credited with reducing the mortality rate for appendicitis. In 1880, Lawson Tait, perhaps the leading British abdominal surgeon, operated on a 17-year-old girl, removing a gangrenous appendix.⁶⁴ The patient recovered. This operation was not reported until 1890, at which time Tait had abandoned appendectomy. It is of interest that Tait steadfastly opposed Listerism. Another



FIG. 8. Abraham Groves of Fergus, Ontario (courtesy of the Academy of Medicine, Toronto).

instance of appendectomy, not known until much later and, therefore, of no influence on the acceptance of appendectomy as a treatment, was performed in 1883 by Abraham Groves of Fergus, Ontario.³⁵ Groves was the son of an Irish immigrant from County Wicklow. He was educated at the University of Toronto, where he was a friend of William Osler, and entered practice in Fergus (Fig. 8). On May 10, 1883, he saw a 12-year-old boy with pain and tenderness in the right lower quadrant of the abdomen. He advised an operation and removed an inflamed appendix. The boy recovered. Although Groves wrote several scientific papers, he did not report this case until it was mentioned in his autobiography, published in 1934.³⁵ In 1884, Mikulicz performed an appendectomy, but the patient did not survive.⁶⁵ In 1885, Kronlein of Zurich, following the suggestion of Mikulicz, successfully performed an appendectomy.⁶⁵ Also in 1885, Charter-Symonds of London performed an operation that was planned by a physician named Mahomed. An extraperitoneal approach to the appendix

was carried out with removal of a fecalith.³⁹ It is often stated (incorrectly) that R. J. Hall performed the first appendectomy for acute appendicitis in 1886. Hall, a surgeon at the Roosevelt Hospital in New York, operated on a 17-year-old male patient with an irreducible inguinal hernia. The hernia was found to contain a perforated appendix that was removed successfully and a pelvic abscess was drained. Henry Sands, who had been an assistant to Willard Parker, reported operating on a patient with appendicitis, removing two fecaliths, and closing the perforation in the appendix with sutures. Although the patient recovered, Sands died not long after reporting this operation. McBurney, an assistant to Sands, commented that Sands' thoughts about appendicitis changed in the interval between the operation just described and his death.⁴⁵ Thomas G. Morton of Philadelphia, in 1887, reported a successful appendectomy with drainage of an abscess in a 27-year-old patient.⁶⁴ Morton was a founding member of the American Surgical Association. His brother and a son died of acute appendicitis.

Dr. Alfred Worcester, a 32-year-old physician of Waltham, Massachusetts, became ill in October of 1887. Drs. John Elliot and Maurice Richardson* of the Massachusetts General Hospital were asked to see Dr. Worcester in consultation, and brought Dr. Reginald Fitz to Waltham to see the patient. All three consultants felt that Dr. Worcester was too sick to benefit from an operation, but Elliot returned the following day and, finding the patient somewhat better, advised operation. The procedure was carried out with the assistance of Dr. Worcester's senior associate, Dr. Edward R. Cutler, and Dr. Henry Wood. An abscess was drained, and the patient recovered after a long convalescence.⁷² During this convalescence, in December of 1887, the Waltham railroad station master developed abdominal pain. The patient requested that Dr. Worcester attend him but, because he was ill, Dr. Worcester sent Dr. Cutler, who made a diagnosis of appendicitis and advised operation. The patient initially declined but, on urging from Dr. Worcester, submitted to the procedure, which was carried out in a small hospital adjacent to Dr. Cutler's residence (Fig. 9). The patient recovered from one of the first early appendectomies for unruptured acute appendicitis.⁷² Cutler included this case with several others in a report published in 1889.⁴⁹ Also in 1889, the first of several important papers by McBurney was published.⁴⁵ Surgeons in the United States rapidly accepted appendectomy for acute appendicitis⁶⁶ and, by 1898, Bernays reported 71 consecutive appendectomies without a death.⁵ In 1902, Dr. A. J. Ochsner of Chicago published

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the first edition of a handbook of appendicitis which advocated nonoperative treatment for spreading peritonitis.⁵⁴ Dr. Ochsner insisted that a regimen of absolutely nothing by mouth, frequent gastric lavage, and nutrient enemas would allow the peritonitis to localize and permit a safer operation. This was probably good advice where experienced surgeons were not available, a situation that existed in large portions of the United States. In 1904, Dr. John B. Murphy† of Chicago reported a personal experience with 2000 appendectomies performed between March 2, 1880, and June 22, 1903.⁵¹ Approximately two-thirds of these were interval appendectomies, and it seems clear that the indications for such operation were liberal. By 1926, LeGrand Guerry‡ was able to cite 2959 personal cases involving surgery of the appendix.³¹

The operative techniques used for appendectomy have never become completely standardized. Midline vertical incisions were used in most early cases, but exposure was not adequate (Fig. 10). The incision described by William Henry Battle of St. Thomas's Hospital in London in 1897 was a vertical incision through the lateral edge of the right rectus sheath.⁴ Denervation of the rectus muscle was common. The lateral muscle-splitting or "gridiron" incision is generally called the McBurney incision after Dr. Charles McBurney of New York.⁴⁶ The incision was used almost simultaneously by Dr. Lewis L. McArthur of Chicago, and was to have been described to the Chicago Medical Society in June 1894.⁶⁹ The program ran overtime and McArthur's paper was postponed. McBurney's publication was in the July 1894, issue of *Annals of Surgery* (Fig. 11). McBurney conceded priority to McArthur in a letter and publicly, but use of the term "McBurney incision" has continued.⁶⁹ J. W. Elliot of Boston advocated a transverse skin incision in 1896.⁶⁹ This apparently attracted little attention. In 1905, A. E. Rockey of Portland, Oregon, again advocated transverse skin incisions for lower abdominal operations.³⁹ Rockey described vertical division of the muscle layers and did not mention muscle-splitting. A year later, Gwilym G. Davis of Philadelphia also advocated making transverse skin incisions, but divided the lateral portion of the rectus sheath and extended laterally by cutting the external oblique and splitting the internal oblique and transversalis in the direction of their fibers.²⁰ Neither Rockey nor Davis mentioned Elliot's paper. Although the eponym, Rockey-Davis incision, is often used today to describe a transverse skin incision, most surgeons use the "gridiron" method of dividing the lateral abdominal muscles in the direction of their



FIG. 9. Edward Rowland Cutler (by permission of the New England Journal of Medicine, Vol. 250, page 289, 1954).

fibers. Medial extension of the gridiron incision by dividing the lateral portion of the rectus sheath was described by Harrington, Weir, and Fowler, but is most often called the Fowler-Weir extension.^{26,34,75}

The management of the appendiceal stump was controversial for years and received a good deal more attention than it probably deserves. In the earliest operations, the appendix was ligated—more or less—close to its origin from the cecum and the distal portion was amputated. The incidence of postoperative complications, fistulae, etc., led to more elaborate methods of dealing with the amputated end of the appendix. Fowler described a "cuff" method, which was quite popular in 1895.²⁶ Dawbarn suggested the use of a purse string suture, placed about the base of the appendix in the cecum, with inversion of the unligated stump of the appendix into the cecum.²¹ H. A. Royster, President of the Southern Surgical Association in 1926, stated that over a period of years, reports of postoperative hemorrhage into the cecum led to general abandonment of this method.⁶⁰

† Fellow of the Southern Surgical Association.

‡ President of the Southern Surgical Association, 1924.

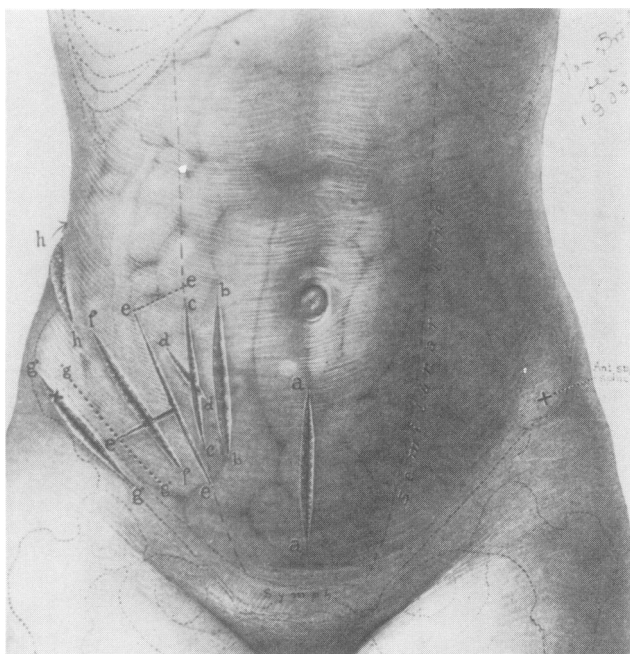


FIG. 10. Some of the incisions advocated for appendectomy (from "The Vermiform Appendix and Its Diseases" by H. A. Kelly and E. Hurdon, 1905. By permission of W. B. Saunders and Co., Philadelphia).

Attempts to "sterilize" the appendiceal stump with chemicals or cautery became popular early, and such agents are probably still employed by some surgeons. It is of interest that Kelly commented in 1905 that "In dealing with the stump of the appendix it is important to avoid two things: first, the simple ligation and amputation leaving the mucous membrane exposed, whether sterilized or not; second, a method that has been frequently practised, namely, that of ligating, amputating, and burying the little stump by means of sero-serous sutures."³⁹ These are certainly the two most popular methods of treating the stump today.

Although early operation for acute appendicitis was rapidly accepted in the United States, the mortality rate, particularly in patients with generalized peritonitis, continued to be formidable. Increased understanding of the pathophysiology of peritonitis led to an appreciation of

THE INCISION MADE IN THE ABDOMINAL WALL IN CASES OF APPENDICITIS, WITH A DE- SCRIPTION OF A NEW METHOD OF OPERATING.

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FIG. 11. Title page of paper by McBurney describing the "gridiron" incision.

the importance of fluid resuscitation and this, together with appreciation of the necessity of surgically interrupting the continuing contamination of the peritoneal cavity, resulted in improving the mortality rate in patients with peritonitis.^{14,57} The advent of antibiotic therapy in the 1940s and 1950s added an important adjunct in preventing and/or treating septic complications.^{2,53}

Death from appendicitis today occurs most commonly in patients at the ends of the age spectrum or in those with immunologic deficiencies.^{1,36,48,57,62} Surgical management with all of its extremely important adjuncts is clearly responsible for the striking reduction in mortality and morbidity due to this disease. Nevertheless, important questions about appendicitis remain unanswered. For example, it is not clear in all instances why intraluminal bacteria penetrate the mucosal barrier. On clinical grounds, some episodes of appendicitis seem to resolve spontaneously, but which attacks and why are important unknowns. Finally, although the spectrum of pathology occurring in appendicitis from resolution through localized abscess through fulminant peritonitis is well described, the precise mechanisms that determine the course in an individual patient are unknown.

Anecdotes

The impact of appendicitis on history cannot be measured but can be illustrated by some examples.

Dr. Ephraim McDowell requires no introduction to the Southern Surgical Association. This Kentucky surgeon performed the first successful ovariectomy on Christmas Day, 1809. Excellent accounts of several aspects of this historic operation have been given by Sabiston[§] and Sparkman^{||}.^{61,66} Although initially criticized, McDowell eventually received recognition for his work during his life, but was better known as a lithotomist (James K. Polk, at 17 years of age, was his patient).³⁰ McDowell was in excellent health until June 1830, when he developed abdominal pain, nausea, and fever and died within two weeks. The sketchy details recorded suggest the diagnosis of appendicitis with perforation.⁶

Frederic Remington was born in upstate New York in 1861 (Fig. 12). His interest in drawing began in childhood and, as the son of a Civil War cavalry officer, he grew up riding horses.⁴⁷ Remington attended the Yale School of Fine Arts, quitting after his father's death. He fell in love but, when his prospective father-in-law refused to allow marriage, the 19-year-old Remington went West to make his fortune. He spent five years following cattle trails from Montana to Old Mexico. Realizing that the "Old West" and its Indians, soldiers,

§ President of the Southern Surgical Association, 1974.

|| President of the Southern Surgical Association, 1978.

settlers, and cowboys, were doomed by the advance of railroads, farming, and barbed wire fencing, he began a lifelong project of perpetuating the West and its characters. He began sending sketches back to Eastern magazines and achieved a little success. After settling in Kansas City, he returned to New York to marry Eva Caton, the same young lady to whom he had proposed five years earlier. The couple's life in Kansas City was difficult and, ultimately, Eva returned to her parent's home. Remington again roamed the West and Southwest, making more sketches. He returned to New York with a large assortment of drawings, sketches, and paintings of the frontier West, along with a total of three dollars in cash. He set out to sell his western art in New York and was quickly successful. In 1890, the Remingtons purchased a large house in New Rochelle, and Remington's financial and artistic success continued to increase.⁴⁷ While on a trip to New York City, he became ill on Monday, December 20, 1909. He returned to his home where his physician was summoned on Wednes-



FIG. 12. Frederic Remington in his studio four years before his death (from "The Frederic Remington Book" by H. McCracken. 1966. By permission Doubleday & Company, Inc., Garden City, N.Y.).



FIG. 13. George Ryerson Fowler.

day, December 22. Dr. Robert Abbe from New York was called as a consultant, and an operation was performed at Remington's home on Thursday. A ruptured appendix was found and removed. Remington did not rally following this procedure and died on Monday, December 27, at 8:30 am. Newspaper accounts gave shock and heart failure as the causes of death.⁴¹ Remington was 48 years old at the time of his death and was in a period of great productivity. He was not only the best known of the Western artists but was a leading American impressionist. Dr. Abbe, the surgeon who operated on Remington, was a prominent surgeon and a member of the American Surgical Association. He was reputed to be an excellent technical surgeon and made several contributions to surgery of the GI tract. He was an accomplished artist, although it is not clear that he knew Remington personally prior to his final illness.²⁹

George Ryerson Fowler has been cited several times in previous paragraphs for his contributions to the early development of the treatment of appendicitis (Fig. 13). He is perhaps best remembered for having described the



FIG. 15. Harvey Cushing (from "Harvey Cushing" by J. F. Fulton, 1946. By permission of Charles C. Thomas, Publisher, Springfield, Illinois).

only when Treves made the famous comment, "Then Sir, you will go as a corpse."¹⁷ Operation was performed in a room at the Buckingham Palace at 12:30 on June 24th. Anesthesia was given by Sir Frederick Hewitt. An abscess was opened and pus was evacuated. The appendix was not removed and the patient made an uninterrupted recovery.⁶⁸ The coronation was, of course, delayed and elaborate preparations for the ceremony were wasted at great financial loss to caterers, florists, etc. Edward was a popular king for the remaining eight years of his life. Frederick Treves became full surgeon at the London Hospital at 31 years of age (1882). In the 1890s, he was the best known surgeon in London with a private practice that became so extensive that he resigned his post at the London Hospital in 1898. Following the operation on King Edward, he is said to have stayed in attendance for seven sleepless nights. He was not an advocate of early operation for appendicitis.⁷⁰ Treves was made a Baronet for his services to the King and could afford to retire in 1908. It is ironic that his daughter died of acute appendicitis.⁸

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